

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

CENGAGE LEARNING, INC.;
BEDFORD, FREEMAN & WORTH
PUBLISHING GROUP, LLC D/B/A
MACMILLAN LEARNING;
MACMILLAN HOLDINGS, LLC;
ELSEVIER INC.; ELSEVIER B.V.; and
MCGRAW HILL LLC,

Plaintiffs,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 24-cv-04274-JLR-BCM

DECLARATION OF CHRISTOPHER THOMPSON

I, Chris Thompson, hereby declare, pursuant to 28 U.S.C. § 1746, as follows:

1. I have been retained by counsel for Plaintiffs in this matter to respond to Google's claims in the Declaration of Christophe Weibel about the supposed burden associated with conducting certain searches, as described below.

I. Experience and Qualifications

2. I graduated from Vanderbilt University with a Bachelor of Engineering in 2010. I majored in computer engineering and minored in engineering management.

3. I have led the creation of multiple data analytics systems and have extensive experience providing source code review and analysis services on matters regarding a range of technologies. I have consulted on the review and analysis of data in connection with numerous litigation matters including matters related to business records and large-scale data productions. I have attached my curriculum vitae as Exhibit A, which includes all of the publications I have

authored in the past 10 years and matters for which I consulted regarding review and analysis of source code. Specifically, I have worked on ten cases against Google, in many of which Google produced significant volumes of data as part of the proceedings.

4. I am currently a Partner at 233 Analytics, LLC. 233 Analytics provides technical analysis in support of litigation and acquisition activities to law firms and other entities. This includes analysis of data productions, software components, network traffic, and other technical systems. I have led teams tasked with analyzing large-scale structured and unstructured data productions in support of legal proceedings. In my role at 233 Analytics, I also provide software development, project management, and technology leadership services to clients in a number of industries including development of mobile applications, API integration, backend services, data processing, machine learning, computer vision, bioinformatics, medical research and ERP-type systems both in a hands-on development capacity as well as in a leadership role overseeing the teams responsible for such tasks.

5. Additionally, I am the Chief Technology Officer at NewsBreak, a company that provides digital shopper marketing solutions to the convenience store industry in the form of digital video and multimedia displayed in brick-and-mortar retail locations as well as fuel dispensing terminals. NewsBreak leverages consumer sales data as well as contextual variables to optimize the advertisements displayed in-store and at fueling locations at convenience stores. As Chief Technology Officer, I am responsible for implementing NewsBreak's suite of data analysis and media processing tools as well as analysis of data consumption, content delivery latency and other key performance metrics. I am also responsible for NewsBreak's overall technology strategy and have personally developed the majority of NewsBreak's custom media distribution and orchestration engine.

6. As described in my curriculum vitae, I have authored or co-authored many publications relating to computer engineering and software development. I have received peer and community recognition for my publications, including “Best Student Paper Award” for a publication on model-driven engineering in software development and “Best Paper” for a publication on software development. My research publications span a number of topics, including the use of mobile devices in data collection, resource optimization, mobile application development, and source code automation and generation tools. Moreover, the software developed as part of my research was used as the basis for augmented reality gaming research at Vanderbilt.

7. I have worked at 233 Analytics since graduating and have consulted on over 100 different cases and matters, as listed in Exhibit A. These matters cover a range of technologies from cellular baseband software to sports video technology, but specifically include topics pertaining to internet tracking and targeted advertising, along with game technology and performance optimization tools.

8. After working on several cases against Google involving Google’s web search technologies, digital advertising, advertising technology, and user behavior tracking, as listed in Exhibit A, I have experience in handling Google’s data and understanding Google’s systems and processes for data searching and retrieval.

II. Background

9. In preparing this declaration, I reviewed the Amended Complaint in this case (Dkt. 38), publicly available documents on Google’s website, screenshots of certain Plaintiffs’ Google’s Merchant Center and Google Ads interfaces, Mr. Weibel’s December 13, 2024 declaration filed on behalf of Google, and a copy of Plaintiffs’ proposal to Google regarding the discovery dispute.

10. I understand from counsel that a merchant using Google Shopping to advertise

products must have a “Merchant Center” account with Google (“Merchant Center Account”).¹ A merchant using paid Shopping ads (as opposed to free ads) also must have a “Google Ads” account (“Ads Account”), which must be linked to a Merchant Center Account.² Certain merchants may also use manager or sub-accounts accounts to link multiple Merchant Center Accounts and/or Ads Accounts, e.g., Multi-Client Accounts, Subaccounts, or My Client Center Accounts.³ Therefore, for many merchants, the Merchant Center Account has one or more accounts linked to it.

11. I understand from the Amended Complaint (Dkt. 38, ¶ 4) that Plaintiffs sent notices to Google informing Google that particular advertisements that Google ran were promoting infringing products. I understand that each of those ads is connected to the Merchant Center Account and, if a paid ad, Ads Account, of a specific Google merchant.

12. I understand from Plaintiffs’ proposal to Google that Plaintiffs have provided Google with a list of the domains represented in the notices Plaintiffs sent to Google, and Google will use those domains to identify the Merchant Center Accounts associated with them. I further understand that Plaintiffs have proposed two types of searches for Google to then perform. The first is that Google disclose to Plaintiffs all the Shopping Ads accounts that the noticed merchant already has linked to the Merchant Center Account that initiated the noticed ad, e.g., any other linked Merchant Center Accounts or Ads Accounts. In other words, Plaintiffs have proposed that Google disclose these other accounts that fall under the “umbrella” of the account Plaintiffs

¹ <https://support.google.com/merchants/answer/12159157?hl> (Google Merchant Center Help) (last visited Dec. 15, 2024).

² <https://support.google.com/merchants/answer/12499498?hl> (Google Merchant Center Help) (last visited Dec. 15, 2024) (“You need to link your Google Ads account and your Merchant Center account before you can create Shopping campaigns.”).

³ See <https://developers.google.com/google-ads/shopping/full-automation/articles/t1> (Google Ads, Shopping Automation, Create a multi-client account) (last visited Dec. 15, 2024); <https://developers.google.com/google-ads/shopping/full-automation/articles/t2> (Google Ads, Shopping Automation, Create sub-accounts for merchants) (last visited Dec. 15, 2024); <https://support.google.com/google-ads/answer/6139186?hl=en> (Google Ads Help, Manager Accounts (MCC) (last visited Dec. 15, 2024).

noticed. Plaintiffs then propose that Google search three data fields for merchants who share the same attributes as the noticed merchants: email address, payment information, and phone number.

III. Data is readily accessible

13. Where two pieces of data are linked together in a user interface, either piece necessarily can be used to search for the other. For example, if the Google user interface available to merchants who use Shopping ads shows that an Ads Account is linked to a Merchant Center Account, the Ads Account necessarily can be used to retrieve the Merchant Center Account, and vice versa.

14. Likewise, where a data field is viewable in the user interface, that data field by definition is readily searchable and retrievable. For example, where a merchant can log into her Ads Account and see her email address, phone number, and payment information, that information necessarily is easily searchable and retrievable; it has to be in order for it to be “fetched” for the interface. Running a search for other accounts that share those same attributes is a straightforward task for a data analyst.

15. From my review of the Shopping user interface, all of the searches Plaintiffs are suggesting are based on data that is viewable in the user interface available to merchants who use Google Shopping ads.

16. In my opinion, the types of searches Plaintiffs are requesting are not overly burdensome. First, as evidenced by the information visible in the user interface, these fields are routinely queried in support of rendering web pages displayed to the merchants who use Google Shopping ads. In order to support responsive and performant user interfaces, the data used in rendering said user interfaces must be stored in a manner that allows for rapid lookup. Moreover, the linkage between these fields (regardless of how they are stored) is evident in the web pages

presented to users of these accounts.

17. Plaintiffs have asked Google to disclose the Ad Accounts that are linked to the Merchant Center Account implicated by Plaintiffs' notices. ¶ 12, *supra*. From my review of Plaintiff user interface information, Google can fetch and display a snapshot of the merchants' connected accounts on a single screen, including their Merchant Center Account and linked Ads Accounts. Likewise, My Client Center Accounts and Subaccounts can be seen linked to Merchant Center or Ads Accounts. Therefore, such accounts are linked together in Google's user interface.

18. Moreover, these account linkages are bi-directional in nature. For example, my review of Plaintiff user interface information confirms that merchants can start on the Ads Account interface to view their linked Merchant Center Account information (and vice versa). From a data perspective, this means that the information stored within the Ads Account is sufficient to identify the corresponding Merchant Center Account (and vice versa). This shows that these Google systems readily identify these linked accounts regardless of the parent-child nature of the relationship.

19. The same is true for Plaintiffs' request that Google search for other accounts that match the identified merchants' email address, payment information, and phone number. In reviewing the Plaintiff user interface information, I observed that each of the data types at issue is readily available within the corresponding account databases.

20. Again, in order to support display in a web user interface, the data must *necessarily* be stored in a manner conducive to rapid retrieval. If not, users would be unable to interact with it in a web-based environment. Google's systems are therefore *already designed* to retrieve this information quickly with minimal computational resources.

IV. Searching would not be burdensome

21. Google's systems are designed to be searched. Beyond the systems that are designed to rapid data retrieve (i.e., in support of displaying information to users in a web-based environment), Google has developed a tool called Flume that is designed to support analysis and queries on massive datasets. Beyond the parallel nature of Flume, it also supports numerous different database systems. As Google itself explains: "FlumeJava's parallel collections abstract away the details of how data is represented, including whether the data is represented as an in-memory data structure, as one or more files, or as an external storage service such as a MySQL database or a Bigtable."⁴

22. In my opinion, the process for querying this data is therefore simple. An engineer will first identify the systems to query based on which tables and systems store the relevant data. As this data (e.g., email, phone number, payment information) is displayed to users via web interfaces, identifying the storage location is trivial and, at worst, involves tracing back the systems that populate those fields. Even this level of effort is highly unlikely, however, as this data also forms the basis of other operations at Google, such as reporting, account notifications, billing, etc. Once the data sources and identifiers are identified, a simple script can be written to traverse the data sources to identify the requested accounts. Running this script to identify a single account should be no more burdensome to Google engineering than identifying all accounts. It is simply a matter of running a script.

23. Moreover, retrieving the matching merchants for three data fields (email address, phone number) is not materially more burdensome than doing so for only one field. Again, these fields are routinely retrieved in support of displaying web pages to users and are therefore necessarily quarriable in a rapid and straightforward fashion.

⁴ Craig Chambers et al., *FlumeJava: Easy, Efficient Data-Parallel Pipelines*, Google Inc., at 363, available at <https://pages.cs.wisc.edu/~akella/CS838/F12/838-CloudPapers/FlumeJava.pdf>.

24. The amount of data this process is likely to retrieve is manageable. I understand that, to date, Plaintiffs’ notices in this case have implicated approximately 1,300 domains. Even if each of those notices were associated with a completely distinct set of data (which is unlikely given the nature of the offending merchants) and each data set was 1GB (which also seems unlikely given the limited set of fields Plaintiffs are requesting), this would only result in 1.3 TB of data in total. I have personally been involved in cases in which Google produced *hundreds* of terabytes of data using a script-based approach.

V. Google’s Declaration

25. I have reviewed the declaration Google submitted from Christophe Weibel. Dkt. 59. By and large, Mr. Weibel does not appear to contest that Google can perform the searches Plaintiffs propose. I address a few points from Mr. Weibel’s declaration.

26. **First**, Mr. Weibel describes the work Google would have had to perform to derive the domains with which the noticed merchants are associated. Dkt. 59 ¶¶ 10–11. However, counsel informs me that Plaintiffs now have provided Google with these domains, obviating the need for Google to perform this work. Mr. Weibel seems to acknowledge this as well. Dkt. 59 ¶ 10 (“While I have been provided with a list of domains by counsel (discussed below), I provide in the following paragraph my understanding of the steps Google must take to identify those domains on its own.”). Likewise, Mr. Weibel discusses the account names associated with Merchant Center Accounts. Dkt. 59 ¶ 21. However, I understand that the “account name” field is not part of Plaintiffs’ current proposal.

27. **Second**, Mr. Weibel says little about the burden associated with the searches Plaintiffs propose.

28. Mr. Weibel acknowledges that Google can search for accounts like Ads Accounts

that already are linked to Merchants Center Accounts. Dkt. 59 ¶ 14 (“The [Merchant Center account ID] can also be used to identify the account numbers of Ads accounts linked to that Merchant Center account. Ads account ID numbers can be used to identify and collect information stored in the Ads account, such as information about paid ad campaigns (including payment information, like associated bank accounts) run by that Ads account.”). As I explained above, this is to be expected. Mr. Weibel does report that “there is not always a one-to-one relationship between Merchant Center accounts and Google Ads accounts, as I explained in paragraph 8 above, making tying ad campaigns and any associated payments to Google to a particular ad—or even a particular Merchant Center account—a time-consuming and often manual process.” ¶ 14. Counsel informs me that Plaintiffs are not asking Google to “t[ie] ad campaigns and any associated payments to Google to a particular ad. . . .” Mr. Weibel’s statement that it is more difficult to tie Ads Accounts to Merchant Center Accounts because there can be many such connections does not make sense. Mr. Weibel himself acknowledges that these accounts already are linked in Google’s systems. Dkt. 59 ¶ 14. Thus, while there may be many such linkages, they should not be difficult to identify.

29. Mr. Weibel acknowledges that Google can search for common email addresses among Merchant Center Accounts and other accounts, and indeed reports that Google has done so already. Dkt. 59 ¶¶ 17–18.

30. Mr. Weibel also does not dispute that Google can search for accounts that share a phone number with other accounts. Dkt. 59 ¶ 20.


31. Nor does Mr. Weibel dispute that Google can search for accounts that share payment information with other accounts. Dkt. 59 ¶ 22. Mr. Weibel reports that accessing this data “requires coordinating with another Product team at Google and takes additional time and

permissions.” *Id.* In data retrieval projects, however, it is not unusual for the data one seeks to be stored in different systems, requiring some amount of coordination amongst departments in a company. There are several ways of dealing with such issues; Google certainly has done so before.

32. **Third**, Mr. Weibel predicts that the searches Plaintiffs describe may retrieve a large number of accounts, and that subsequently producing information about those accounts might be difficult. For example, Mr. Weibel states, “I know from experience at Google that broad requests for disparate categories of data and information implicate multiple databases and sources (put differently, there is no central location or system where such data or information is stored).” As I state above, relevant data often resides on multiple systems. Data engineers, including those at Google, are well-prepared to deal with this issue.

33. In short, Mr. Weibel’s declaration does not alter my expectation that the searches Plaintiffs propose are not overly burdensome.

Executed December 16, 2024, in Boston, MA



Christopher Thompson